

IN THE CLAIMS

Please amend the claims as follows:

1. (currently amended) A ~~power supply unit, voltage converter~~ comprising:

a plurality of first power supply circuits ~~having different power conversion efficiency characteristics for~~ capable of converting an input voltage to an predetermined output voltage;

a second power supply circuit capable of converting said input voltage to said output voltage, wherein said second power supply circuit is connected in parallel with said first power supply circuit ~~an input logic for inputting a control signal for controlling power consumption states; and~~

means for providing a control signal to activate either said first power supply circuit or a switch for switching to one of said plurality of second power supply circuits to convert said input voltage to said output voltage based on said control signal a load demand on said voltage converter.

2. (currently amended) The ~~power supply unit according to~~ voltage converter of Claim 1, wherein said first power supply circuit is a series power supply circuit, and said second power supply circuit is a switching power supply circuit ~~switch comprises activation means associated with each of said plurality of power supply circuits and activates the associated power supply circuit based on the state of said control signal.~~

3. (currently amended) The ~~power supply unit according to~~ voltage converter of Claim 1, wherein said first power supply circuit has a relatively high conversion efficiency during a low load demand, and said second power supply circuit has a relatively high conversion efficiency during a high load demand ~~plurality of power supply circuits comprises a first power supply circuit for accommodating a lesser electrical load and a second power supply circuit for accommodating a greater electrical load; and said switch switches to said first power supply~~

~~circuit in response to assertion of said control signal or said switch switches to said second power supply circuit in response to deassertion of said control signal.~~

4. (currently amended) The power supply unit according to voltage converter of Claim 1, wherein said first power supply is activated by said control signal when said load demand on said voltage converter is low, wherein said second power supply is activated by said control signal when said load demand on said voltage converter is high further comprising a holding circuit for ~~holding a power output from one of said plurality of power supply circuits for a predetermined period of time during switching by said switch.~~

5. (currently amended) The power supply unit according to voltage converter of Claim 4, wherein said load demand on said voltage converter is low when said voltage converter is in a suspended state, wherein said load demand on said voltage converter is high when said voltage converter is in a non-suspended state ~~control signal is delivered through said holding circuit prior to being received by a power supply circuit.~~

6. (currently amended) A power supply unit, voltage converter comprising:

a plurality of first power supply circuits having different power conversion efficiency characteristics for capable of converting an input voltage to an predetermined output voltage;

a second power supply circuit capable of converting said input voltage to said output voltage, wherein said second power supply circuit is connected in parallel with said first power supply circuit ~~detector for sensing the amount of power consumption~~; and

a detecting circuit for activating either said first power supply circuit or said second power supply circuit to convert said input voltage to said output voltage ~~switch for causing switching to one of said plurality of power supply circuits based on said amount of power consumption~~ an amount of current supplying to said first and second power supply circuits.


7. (currently amended) The ~~power supply unit according to~~ voltage converter of Claim 6, wherein said first power supply circuit is a series power supply circuit, and said second power supply circuit is a switching power supply circuit ~~said detector senses said amount of power consumption based on the amount of electric power input to said plurality of power supply circuits.~~

8. (currently amended) The ~~power supply unit according to~~ voltage converter of Claim 6, wherein said first power supply circuit has a relatively high conversion efficiency during a low load demand, and said second power supply circuit has a relatively high conversion efficiency during a high load demand ~~switch comprises activation means which is associated with each of said plurality of power supply circuits and activates the associated power supply circuit based on said amount of power consumption.~~

9. (currently amended) The ~~power supply unit according to~~ voltage converter of Claim 6, wherein said first power supply is activated by said detecting circuit when said current amount is below a predetermined value, wherein said second power supply is activated by said detecting circuit when said current amount exceeds said predetermined value ~~plurality of power supply circuits comprises a power supply circuit for light load, and a power supply circuit for heavy load and said switch causes switching to said power supply circuit for light load if said amount of power consumption is smaller than a predetermined value or causes switching to said power supply circuit for heavy load if said amount of power consumption is greater than said predetermined value.~~

10. (currently amended) The ~~power supply unit according to~~ voltage converter of Claim 6, wherein said current amount is below a predetermined value when said voltage converter is in a suspended state, wherein said current amount exceeds said predetermined value when said voltage converter is in a non-suspended state ~~further comprising holding means for holding a power output for a predetermined period of time during switching by said switch.~~

Please add Claims 11-13 as follows:

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11. (new) The voltage converter of Claim 1, wherein said first and second power supply circuits share a common voltage input and a common voltage output.
 12. (new) The voltage converter of Claim 6, wherein said first and second power supply circuits share a common voltage input and a common voltage output.
 13. (new) The voltage converter of Claim 6, wherein said detecting circuit includes a current sense amplifier coupled to a power input line for said first and second power supply circuits.
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